

# Miximalist versus minimalist technologies for bear safety, Part 1

by Ed Berg



*Ed Berg demonstrates a hand-held marine flare, which can be used as a bear deterrent. USFWS/Jane Tollefsrud.*

Bear protection is a universal interest among outdoor Alaskans. Outside of our various protective shells, we are intruders on bear turf and bears can have a proprietary objection to our presence.

Like many Alaskans I have gone the full route in bear protection—aerial flares, .44 magnum pistol, 12-gauge shotgun, pepper spray and most recently hand-held marine flares. To date, noise making and vigorous hand-waving have been my best deterrents.

Every spring at the Kenai National Wildlife Refuge we run new field employees through a two day bear safety training program, including a day at the rifle range shooting at stationary and moving targets with slug-loaded 12-gauge shotguns. For many of our younger seasonal workers this is the first time in their life that they have ever handled a gun. Our field crews all have at least one person carrying a shotgun, who has qualified as a shooter by hitting a moving bear target in the kill zone two out of three shots. Permanent employees must re-qualify every spring at the range with the moving bear target. We also encourage everyone to carry pepper spray and noisemakers.

To date we have been lucky; our field crews have never had to spray a bear or shoot in self-defense, probably because we typically make a lot of noise in the field and generally work in groups. We like to remind ourselves of the statistic that there has never

been a serious bear attack on four or more people, at least when they are grouped together.

Like many safety issues, the real issue with bears is what you yourself can deliver when push comes to shove. Can you effectively deploy a shotgun, pistol or pepper spray? Will you have the presence of mind to not run, or to curl up in a ball and let a brown bear take a bite out of you? We do our drills—both physical and mental—and hope that the reflexes will be there when we need them.

There seem to be two schools of thought about bear protection: maximalist and minimalist. The maximalist approach basically uses firearms, which have a comforting appeal to the experienced user, myself included, and should theoretically stand up well in liability court cases. The well-armed traveler who is “loaded for bear” can however have a boundless sense of self-confidence that statistics suggest is vastly over-inflated.

The minimalist approach—in the extreme—uses only careful awareness of one’s surroundings and makes plenty of noise. For whatever reasons, most of us probably use this approach on informal outings, jogging, and walking the dog. The long history of bear-mauled unarmed joggers on the Kenai suggests that this is not an adequate approach.

The next step up uses non-lethal tools like pepper spray, flare guns, and hand-held flares. When I say “non-lethal,” I mean non-lethal to both bears and to fellow human beings, including the user.

A recent study of 258 bear-human incidents in Alaska involving firearms found that firearms were effective in only 68% of the cases, i.e., the failure rate was 32%. Conversely, pepper spray was effective in 94% of 75 incidents in Alaska where pepper spray was deployed. This study by Tom Smith, formerly of the USGS in Anchorage and now at Brigham Young University in Utah, and his colleagues is currently under review, with anticipated publication in 2007.

In spite of its impressive statistics, pepper spray has its detractors. Clint Hlebechuk and Simyra Taback operate the Hallo Bay Wilderness camp, where

tourists arrive daily for world-class brown bear viewing along the Katmai coast. Clint and Simyra are outspoken critics of pepper spray and don't allow clients to bring pepper spray to camp. They and their guides carry Ikaros-brand hand-held flares and no firearms. Ikaros marine flares weigh only eight ounces, are 10-inches long, and are activated instantly by pulling a string. They can be fired bare-handed and burn for 60 seconds with an extremely intense red light and abundant smoke. These are not aerial flares, and do not shoot out any kind of fireball into the air or at the bear. Nor are they fusees, such as are used for highway safety warnings, that are activated by scratching on a striker surface. The flares are made by the Swedish company Hansson Pyrotech and cost about \$18 at Eagle Enterprises in Homer and Anchorage. (A Google internet search on "Ikaros flares" leads to a color video on these flares.)

These flares appear to be well-suited for the careful, non-confrontational kind of bear viewing done at places like Hallo Bay and McNeill River. The bears in

these places are not tame but they are more or less acclimated to the presence of human beings. Flares have been used on four occasions in 16 years at Hallo Bay to discourage overly inquisitive sub-adults from approaching too closely. How well they would work with a surprised bear, say a mother with cubs, has not been tested at Hallo Bay. Pepper spray, however, has a proven track record in hostile close encounters, and has been 94% effective, according to Tom Smith's data.

Next week, I'll explore the pros and cons of these technologies in more detail. I have no "one size fits all" solution to recommend for all cases. Bears vary in their personalities, and bear encounters vary in the degree of closeness and surprise. I, for one, haven't given up my 12-gauge, but I am including more non-lethal alternatives in my arsenal of possibilities.

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